

Claims

What is claimed is:

- 5 1. A method comprising:
 determining if a head switch timing has changed from a reference
 head switch timing such that a recalibration criteria is met; and
 performing recalibration of head switch timing values associated
 with each of at least two surfaces if the recalibration criteria is met.
- 10 2. The method of claim 1, wherein the recalibration criteria is a number
 of missed address marks during a head switch operation.
3. The method of claim 1, wherein performing recalibration of head
15 switch timing values includes:
 reading a head switch recalibration flag during an idle cycle of the
 controller; and
 performing the recalibration of the head switch timing values if the
 head switch recalibration flag is set, wherein the head switch recalibration
20 flag is set in response to determining that the recalibration criteria has been
 met.
4. The method of claim 2, wherein performing recalibration of head
 switch timing values includes:
25 setting the head switch timing values to a center of an address mark
 detection search window to thereby generate new head switch timing
 values.

5. The method of claim 4, wherein performing recalibration of head switch timing values includes:
- comparing the new head switch timing values to original head switch timing values to generate a difference;
 - 5 determining if an absolute value of the difference is greater than a threshold; and
 - adjusting the new head switch timing values if the absolute value of the difference is greater than the threshold.
- 10 6. The method of claim 5, wherein the threshold is one half of a servo sector time.
7. The method of claim 5, wherein adjusting the new head switch timing values includes:
- 15 adding or subtracting one servo sector time to or from the new head switch timing values.
8. The method of claim 5, further comprising:
- storing the new head switch timing values in a sector on a disc of a
 - 20 disc drive; and
 - storing the original head switch timing values in an adaptive area of the disc drive.
9. An apparatus for performing head switch timing recalibration in a
- 25 disc drive, comprising:
- means for determining if a head switch timing of the disc drive has changed from a reference head switch timing such that a recalibration criteria is met; and

means for performing recalibration of head switch timing values associated with each surface of the disc drive if the recalibration criteria is met.

5 10. The apparatus of claim 9, wherein the recalibration criteria is a number of address marks missed during a head switch operation.

11. The apparatus of claim 9, wherein the means for performing recalibration of head switch timing values includes:

10 means for reading a head switch recalibration flag during an idle cycle of the controller; and

means for performing the recalibration of the head switch timing values if the head switch recalibration flag is set, wherein the head switch recalibration flag is set in response to determining that the recalibration
15 criteria has been met.

12. The apparatus of claim 10, wherein the means for performing recalibration of head switch timing values includes:

20 means for setting the head switch timing values to a center of an address mark detection search window to thereby generate new head switch timing values.

13. The apparatus of claim 12, wherein the means for performing recalibration of head switch timing values includes:

25 means for comparing the new head switch timing values to original head switch timing values to generate a difference;

means for determining if an absolute value of the difference is greater than a threshold; and

means for adjusting the new head switch timing values if the absolute value of the difference is greater than the threshold.

- 5 14. The apparatus of claim 13, wherein the means for adjusting the new head switch timing values includes:

means for adding or subtracting one servo sector time to or from the new head switch timing values.

- 10 15. The apparatus of claim 12, further comprising:

means for storing the new head switch timing values in a sector on a disc of the disc drive; and

means for storing the original head switch timing values in an adaptive area of the disc drive.

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16. An apparatus comprising at least two transducers and at least two storage surfaces, wherein the apparatus is adapted to determine if a head switch timing has changed from a reference head switch timing such that a recalibration criteria is met and adapted to perform recalibration of head switch timing values associated with each surface if the recalibration criteria is met.
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